Case Management CM / ECF Electronic Case Files

The Case Management/Electronic Case Files (CM/ECF) system uses Internet technology to give the U.S. federal judiciary a new mechanism for information handling. Attorneys can file pleadings from their offices via a Web browser; judges, court staff, and attorneys have immediate access to new and historical documents; and case data and documents are managed effectively.

CM/ECF is currently used in four district and five bankruptcy courts around the country. Since its inception, CM/ECF has handled over 15,000 cases and 175,000 documents and docket entries for a user community of 75 judges, 400 court staff, and 1000 attorneys who use it to file their documents. Because of its initial success, CM/ECF service will be expanded throughout the federal courts over the next few years. Consequently, the federal courts are reexamining traditional policies, practices, and rules that may need to be adjusted for the Internet world.

The prototype for CM/ECF was developed by the Administrative Office (AO) of the U.S. Courts with the participation of nine volunteer courts. The AO's Technology Enhancement Office (TEO) designed and programmed the software and was assisted by the Applications Management and Development Division (AMDD). This prototype for bankruptcy and civil cases was evaluated against various commercial and court-developed alternatives and was chosen as the basis for a CM/ECF system to serve all appellate, district, and bankruptcy courts. An AO project team under AMDD is managing the ongoing development and implementation of CM/ECF.

Features of CM/ECF

- Next-generation case management, tracking of motions, answers, deadlines, and hearings.
- Up-to-date reports, queries, and docket sheets produced.
- Electronic delivery of documents to, from, and within the courts.
- Electronic retrieval of case documents and dockets by all users.
- Electronic document management, storage, security, and archiving.
- Automatic creation of docket entries from attorney filings.
- Electronic notices of filing to other CM/ECF participants.

Courts using CM/ECF today

Main CM/ECF Site

ecf.uscourts.gov

District Courts

Western District of Missouri
ecf.mowd.uscourts.gov
Eastern District of New York
ecf.nyed.uscourts.gov
Northern District of Ohio
ecf.ohnd.uscourts.gov
District of Oregon
ecf.ord.uscourts.gov

Bankruptcy Courts

District of Arizona
ecf.azb.uscourts.gov
Southern District of California
ecf.casb.uscourts.gov
Northern District of Georgia
ecf.ganb.uscourts.gov
Southern District of New York
ecf.nysb.uscourts.gov
Eastern District of Virginia (Alexandria)
ecf.vaeb.uscourts.gov

What CM/ECF users say they like...

- *Capability to view filings after normal court business hours*
- *Advantage of instant filing any time of the day or night*
- *You don't have to leave your office, spend time making extra copies, or use messengers*
- *Less paper, smaller files, more efficiency*
- *Ease and speed of running reports*
- *Availability of documents from the Web*
- *Immediate notification and access to pleadings*
- *You don't have to move the actual paperwork through the court process, mail copies to parties, etc.*
- *It's easy to use*

Building on experience

We have learned a great deal from past experiences with case manage -ment systems for the federal judiciary.

These include ICMS (developed in the 80s), which is now nearing the end of its useful life. These are some of our conclusions:

- *Actively-used functions of ICMS represent the minimum requirements for CM/ECF.*
- *We must enable the courts to choose their timeframe for change and to decide how they want to handle filing and docketing (from simple paper, to electronic filing by the courts, to electronic filing by the source and automatic docketing).*
- *System must adapt to the processes of the court, not force the court to adopt new processes.*
- *Electronic filing by the originators and automatic docket entries can greatly reduce the workload of docketing clerks and case administrators.*
- *To be effective, the system must be used by all users — the legal community, the public, and the courts. For example, if it does not have value to attorneys, they will not use it and important court timesavers, such as electronic filing by attorneys, will not be realized.*
- *There will always be paper, because there will be some documents that cannot be imaged, such as oversized documents.*
- *Our users are accustomed to dealing with paper. For example, "white" and "blue" books, along with local rules, define what the format of paper documents should be.*
- *Document formats are important to the courts and attorneys, and they must be the same in electronic or paper form. Anyone viewing a document must see the same content and format as the originator.*
- *To take advantage of the full range of electronic filing possibilities, they must be integrated with existing court processes, rules, and procedures.*

The CM/ECF Project

The goal of the CM/ECF project is to create a system that allows nearly all documents associated with a court case to be handled electronically.

CM/ECF supports the unique interests of different communities (the courts, the attorneys, and the public) while providing the same range of document processing capabilities to all.

We expect that many people will file documents electronically over a network by using a standard Web browser, even though CM/ECF does allow people to submit the same documents on a computer disk or even on paper if they prefer. The documents submitted electronically must be in Portable Document Format (PDF).

The network used to access CM/ECF is the DCN (the Judiciary's private network), in the case of the courts, or the Internet, in the case of the attorneys and the public.

Interaction with CM/ECF is via a Web browser, HTML forms that enable document "attachments," and interactive software. The Web server application software collects the forms data, processes it, and forwards data and documents to a private server for storage.

As byproducts of the filing, case management information is created and notices of filing are transmitted to case participants. Immediately upon filing, the case docket sheet and associated documents become available on-line to both the case participants and the public.

For example, an attorney prepares a motion on her PC with her word processor of choice. She saves the document and "prints" it using Adobe's PDFWriter. Using her Web browser, she then connects to the home page of the federal court associated with the filing and "files" the motion. The attached PDF document is automatically forwarded to the court's CM/ECF Web site. Once the data is validated, it is stored in the court's CM/ECF database.

CM/ECF was first introduced as a prototype in the fall of 1996 and has been used by other federal district and bankruptcy courts since late 1997 and early 1998. CM/ECF activity has steadily increased with more than 1,000 new cases and 15,000 additional entries each month.

The nine prototype demonstration courts have helped us prioritize and refine the capabilities of the system. By combining our systems expertise with the courts' business expertise, we have developed a system that exactly matches the needs of the federal courts.

CM/ECF...designed for the federal courts

CM/ECF is being developed by the AO's TEO and AMDD in cooperation with federal district, bankruptcy, and appellate courts. These organizations have been involved in the development of virtually every national case management system for the federal judiciary since 1976. The six original TEO application developers have, in total, over 120 years of experience with computer systems for the federal judiciary; the full implementation team has more than 250 years of experience.

The designers understand that, while staffing and money is tight in the federal courts, the caseloads continue to increase and the case document management challenges are enormous. They know that any new system cannot add to the workload. For these reasons, they designed the CM/ECF architecture in such a way that it allows for:

- Use of the networks, machines, and word processing facilities in use today by the federal courts and legal community.
- Gradual implementation of electronic filing at each court's chosen pace.
- Tailoring of the system to local court preferences and practices.

The system design is based on the following key "enablers" — the standards, hardware components, and software components that minimize the cost to create, modify, support, and deploy the CM/ECF system:

- DCN ("inside") access to enable the courts to use the communications network already in place.
- Internet ("outside") access to enable easy and inexpensive electronic communication from the attorneys (unlike other case management systems, CM/ECF enables information submission over the Internet).
- Web browser is free and available to everyone, to replace the previous requirement for PC-based software.
- PDFWriter, which enables any word processor on any platform to be used.
- Any existing PC or Macintosh with a network connection; federal courts already have DCN access and most attorneys have Internet access.

The Benefits of CM/ECF

For the courts...

- *Immediate docket entries*
- *Immediate local or remote access from any location*
- *No waiting for file room retrieval*
- *No lost folders or documents*

For the attorneys...

- *No couriers, no post offices*
- *Immediate Internet access from any location*
- *Easy notice to other counsel*
- *Immediate and up-to-the-minute reports and data*
- *24-hour/7-day access and filing*

What does CM/ECF cost?

For users...

The CM/ECF design provides for low-cost user access to the system. Any modern PC with Internet or DCN access and Web browser software can access CM/ECF. Retrieving electronically filed documents requires the Adobe Acrobat PDF Reader software (or equivalent), which is available at no cost from Adobe over the Internet.

Adobe Acrobat PDFWriter and/or Acrobat Exchange is required for filing. Any attorney with a Bar ID can obtain these for $129 (list price is $295); for federal court employees, the cost is about $50.

For the court...

CM/ECF requires two servers: an Internet-accessible (outside) Web server to handle attorney and public access, and a DCN-accessible (inside) Web server to handle court access.

The outside Web server can be a medium-sized system, e.g., Pentium processor; the inside database server a slightly larger Pentium processor, with some upgrades and much expanded disk space for document storage.

Early Development of CM/ECF

TEO experimented with Electronic Case Files as early as 1988. Various commercial vendors have also explored electronic filing services for attorneys with mixed results. Some commercial ECF vendors have been used in federal courts.

An ECF demonstration project started in the spring of 1995 in response to severe problems that the Northern District Court of Ohio was having with a large number of maritime asbestos cases. The AO implemented an operational ECF service in three months. This project served as the forerunner to a fully functional CM/ECF prototype.

In summer of 1996, the Southern District of New York Bankruptcy Court began working with the AO to implement an electronic filing service for large Chapter 11 cases. This service became operational in late 1996 and demonstrated that the prototype ECF could support large workloads and be tailored to the local needs of the courts. In the spring of 1997, seven additional courts began participation in an expanded CM/ECF prototype project.

The National CM/ECF Initiative

The Committee on Automation and Technology of the U.S. Judicial Conference strongly supported the organization of the "ECF Initiative." Its goal is to expedite the development of electronic case file systems and new case management systems and deploy these systems throughout the federal judiciary. After extensive development of functional requirements by a large group of court and AO personnel, a comprehensive cost and benefit analysis was completed. This analysis included detailed technical, risk, and cost comparisons among several commercial and judiciary-developed CM/ECF candidate systems. The AO's CM/ECF service was selected as highest rated in all major evaluation categories. This system will replace the current case management systems with a next-generation case management and electronic case files application.

The CM/ECF Technical Solution

The success of CM/ECF is largely due to the chosen technical solution, which is characterized by the following practices.

Use of commerical products and standard languages

- Commercially available products (Informix and StrongHold) are used to manage the database and the Web servers, respectively.
- Standard programming languages (Perl, HTML, and JavaScript) are used for the application system.

Ease of maintenance through high-level tools

The CM/ECF design team created some programming tools that combine the developers' programs together in such a way that many standard programming tasks are eliminated. These include complicated processes associated with the latest technology, such as maintaining accurate page context information as the Internet user navigates between pages, collecting data from those pages and saving it for special database interface procedures, checking the user's access rights to those pages, and issuing special database commands when appropriate. Because of these support tools, changes can be made faster and a programmer's learning process is simplified.

The provision for user customization

Three basic activities occur when a person selects a docket category from a CM/ECF menu:

- User identifies the specific event type to be docketed, such as "answer to cross-claim."
- CM/ECF prompts for preliminary information, such as the case number and parties.
- CM/ECF runs the processes for that event type.

For each event type, the court's CM/ECF administrator can specify (using a simple Excel spreadsheet) which processes to run, the sequence in which to run them, and certain behaviors of the processes, such as how the user will be prompted and what data will be collected. The administrator can also set up overall CM/ECF parameters that are unique to the particular court site, such as court name and date formats.

CM/ECF provides special tables that enable these tailoring activities.

Graphical User Interface

Once a person logs into CM/ECF, he is immediately presented with a series of very simple, interactive pages that provide choices and input fields and that hyperlink to other pages, based on the person's selection.

We learned a very important lesson from prior systems: keep it simple. We are in the process of refining the interface to ensure this is true in every aspect of a person's interaction with the system.

Isolation of the public and private systems

The Outside Environment

CM/ECF is publicly accessible from the Internet. Any authorized user, such as an attorney, can access the system by using a standard Web browser, such as Netscape. His or her CM/ECF requests and data are submitted through the Common Gateway Interface (CGI) recognized by Internet browsers.

An "outside" server, protected by a special "firewall" designed for the Internet, processes all public requests. The firewall software protects against intruders and unauthorized activities.

The Inside Environment

CM/ECF is privately accessible by the federal courts from their Data Communications Network (DCN). They submit simple requests and data over this network.

An "inside" server, protected by special firewall software designed for the inside environment, processes all court user requests.

Both servers have identical software to enable this separation of public and private activity and to handle access to the Internet.

Use of Portable Document Format

All documents uploaded to CM/ECF must be in Portable Document Format (PDF). This format enables regular documents to be viewed electronically and shared with others on the Internet without loss of any document formatting characteristics. PDF is also a secure format that doesn't allow hidden text or links, as do many word processors. *Saving a document in PDF requires only a few clicks of your mouse*.

Portable Document Format

We know that document formats are important to attorneys and judges. They expect their electronic documents to look exactly the same as the pages they designed themselves. We couldn't deliver this capability electronically with the old unformatted ASCII text files. Today we can deliver a PDF document, which is an exact replica of the original source document — but one that cannot be changed.

We also know that paper is with us for the foreseeable future. Electronic documents will generally need to be printed, and the printed and displayed formats must be the same.

PDF enables a "fixed format for all" and preserves formatting in electronic and paper form.

PDF is a proprietary, open standard from Adobe, Inc. Anyone may write software that creates or reads PDF documents without any restrictive licensing or fees, i.e., there is no legal or economic barrier to using PDF as the format for electronic documents.

Free PDF readers are available on Web sites for most major computers and operating systems. The PDF readers can be used standalone, or in conjunction with a Web browser, to read PDF documents.

Security, Integrity, Reliability

CM/ECF is positioned between the private federal court networks and the public Internet, making security a key issue. In addition to preventing unauthorized access to the private court networks, we must guarantee that no one can destroy, modify, or forge electronic data filed at the court. Also, we must ensure 24-hour CM/ECF availability.

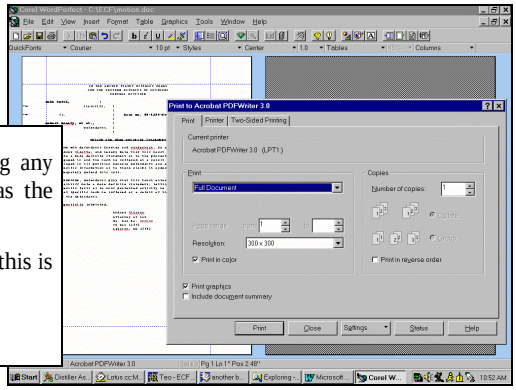
CM/ECF security features

- *Court and public servers are separated by a firewall (with the court's database on an isolated inside server)*
- *CM/ECF security design and implementation was verified by independent security experts*
- *Data is written to the database, a tape transaction log, and a replicated off-site database*
- *Documents are electronically signed by the court*
- *Notice of electronic filing is provided with electronic court signature of documents*
- *All hardware systems are highly reliable*
- *We use disk failure-tolerant RAID data storage*

Filing with CM/ECF

You can see from the following example that CM/ECF is very easy to use. These windows show the steps you would take to file a motion using CM/ECF. Although each court can tailor specific aspects of docketing processes, such as the selections and text displayed, the basic process is the same for all court types.

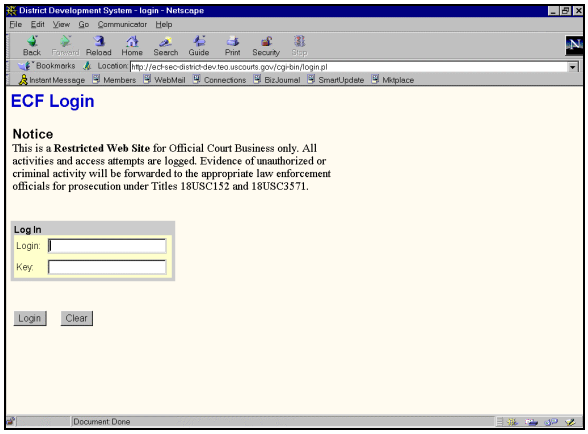
1. Prepare the document



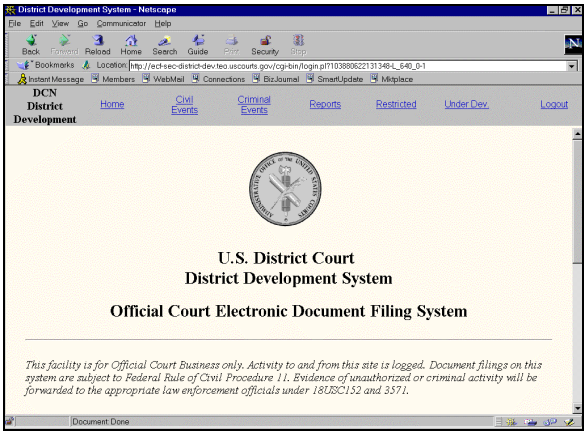
You can create the document to be filed by using any word processor. Then select *Acrobat PDFWriter* as the printer to prepare your document for CM/ECF.

In filing a document, you just show CM/ECF that this is the document you want to file (see Step 8).

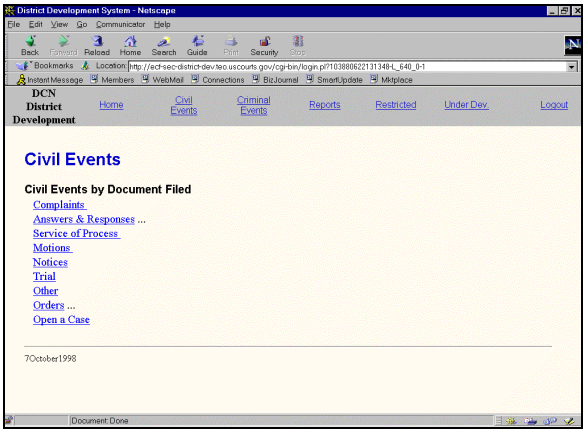
2. Log into ECFp



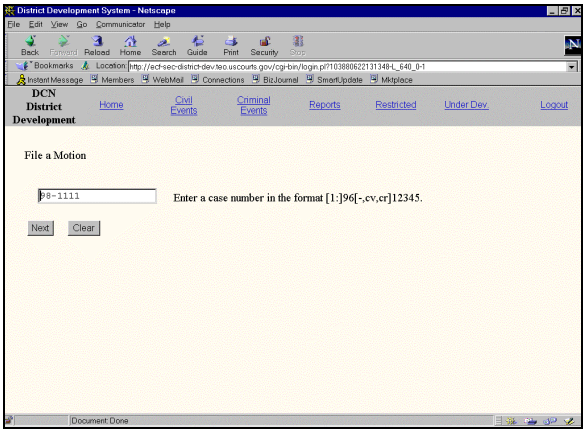
3. Select a function



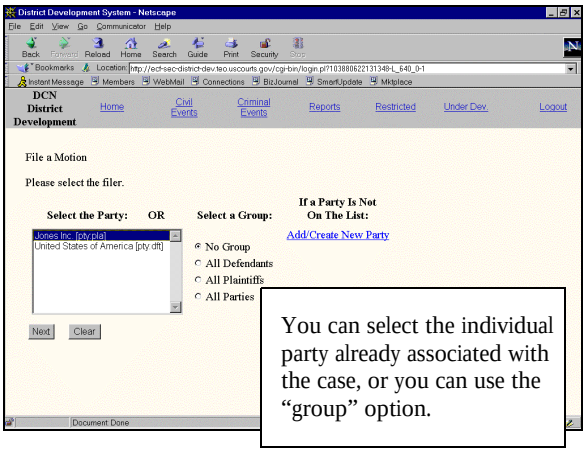
4. Select the document type



5. Enter the case number

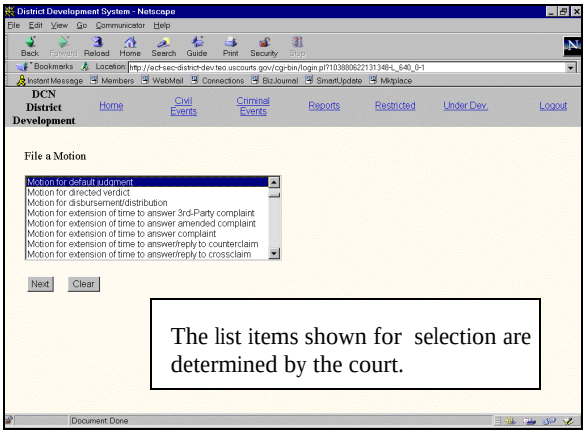


6. Select the party



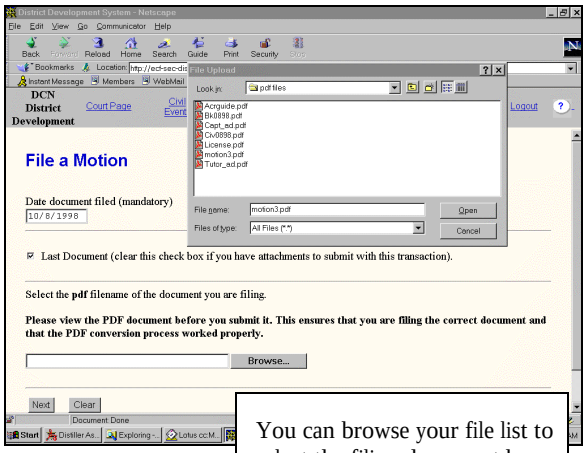
You can select the individual party already associated with the case, or you can use the "group" option.

7. Select the relief(s)



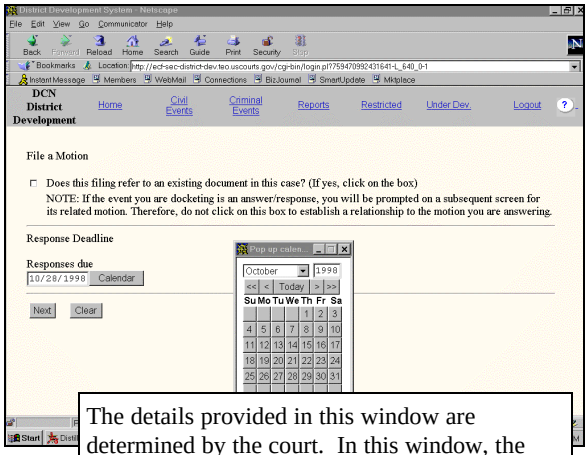
The list items shown for selection are determined by the court.

8. Specify the document



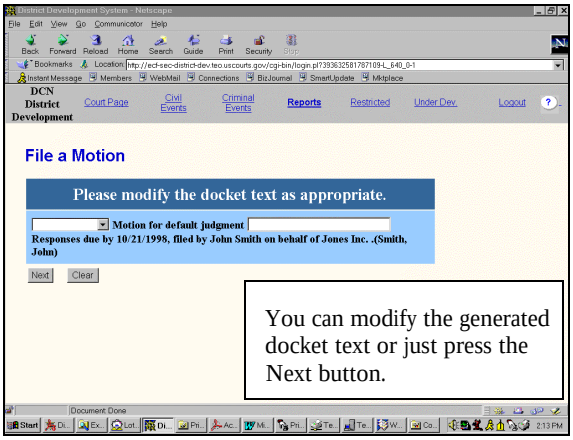
You can browse your file list to select the filing document by using the Browse button.

9. Specify the details



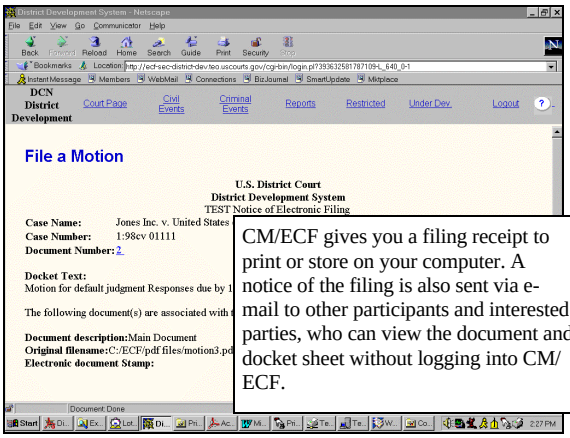
The details provided in this window are determined by the court. In this window, the person has selected a response deadline by using a pop-up calendar.

10. Review the docket text

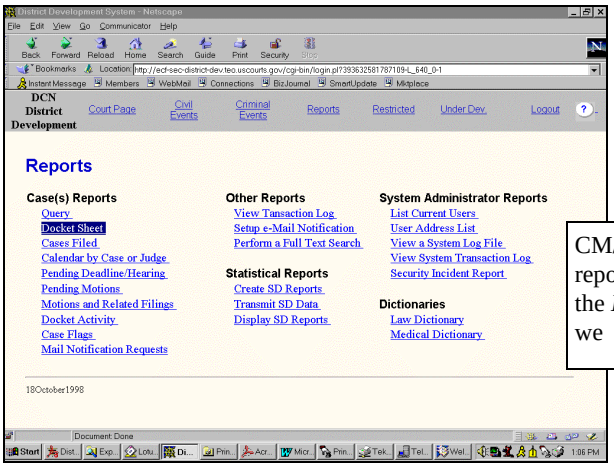


You can modify the generated docket text or just press the Next button.

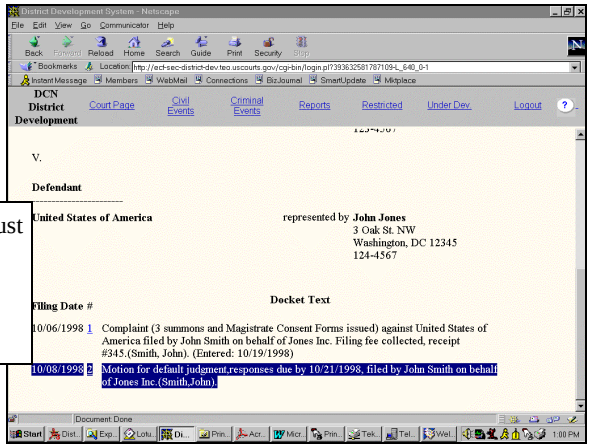
11. Done!



CM/ECF gives you a filing receipt to print or store on your computer. A notice of the filing is also sent via e-mail to other participants and interested parties, who can view the document and docket sheet without logging into CM/ECF.



CM/ECF offers a wide variety of reports. You can select one of these, the *Docket Sheet*, to verify the filing we just completed in this example.



The Docket Sheet shows the filing just completed. You can click on the document number to display the associated PDF document.

The following can be found at the Judiciary's Internet site (www.uscourts.gov):

"Electronic Case Files in the Federal Courts: A Preliminary Examination of Goals, Issues and the Road Ahead," March 1997.

"Local Rules and Procedures Governing Prototype Electronic Case File (ECF) Systems in the Federal District and Bankruptcy Courts," December 1998.

"Electronic Case Files: Interim Technical Standards and Guidelines." February 1998.

Inquires can be directed to:

Electronic Case Files Initiative, Gary Bockweg, Project Manager
(202-273-2736; bockweg@teo.uscourts.gov)

Electronic Case Files Prototype, Michael Greenwood, Project Manager
(202-273-2748; greenwoo@teo.uscourts.gov)

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